

# CCP Community Advisory Committee Meeting

**Cook Composites and Polymers Co. (CCP)- Saukville Facility**

**Saukville, Wisconsin**

**May 22, 2001**



## CCP Cooperative Agreement Review

- Motivation for ending hazardous waste incineration at Saukville
  - Recycle, not destroy, 2MM lbs. of xylene per year
  - Eliminate the ignitability hazard of CCP wastewater by separating and recovering xylene
  - Focus investment in progressive technologies
  - Reduce staff burden for CCP and WDNR
  - Save \$220,000 to \$280,000 in raw material purchases (\$400,000 minus cost of natural gas)
  - Eliminate stigma of hazardous waste incineration from CCP and the Village of Saukville

## CCP Cooperative Agreement Review

- Other waste management alternatives that were available to CCP
  - Transport waste off site for disposal
  - Pursue the *Comparable Fuels Exclusion* to the MACT standard for solvent waste incineration
  - Pursue zero discharge wastewater treatment of hazardous waste reaction water under Section 402 of the Clean Water Act.
  - Evaluate and implement physical or biological pre-treatment technologies under Section 402 of the Clean Water Act.
  - Invest additional CCP resources in the existing incinerator for continued waste destruction under MACT



## CCP Cooperative Agreement Review

- The CCP project will reduce hazardous and heavy metals emissions
  - Metals emissions to be reduced between 50 to 99% for hazardous and heavy metals (Mercury, Arsenic, Cadmium, Chromium, Lead, Barium, Beryllium, etc)
  - Emission reduction due to ending solvent incineration
  - Emission rates calculated from metals concentration in waste from 1999 waste analysis for license renewal
  - Proposed emission reduction is on top of already low metals emissions - calculation table is available
  - Sodium, which is neither considered a hazardous nor a heavy metal under state or federal regulation, would be emitted in the current proposal - no standards will be exceeded



## CCP Cooperative Agreement Review

- CCP's activity and outlook regarding glycol recovery
  - CCP has been enthusiastically and actively testing the techniques for glycol recovery from reaction water
  - CCP R&D has made glycol loss reduction and recovery a priority for polyester process improvement
  - CCP Purchasing department has explored and identified external markets for reclaimed glycol to supplement internal CCP re-use
  - CCP cannot accept a deadline on this pollution prevention project - the project must be voluntary



## CCP Cooperative Agreement Review

- **CCP's activity and outlook regarding solvent (xylene) recovery**
  - Source reduction for xylene is the focus of the Saukville plant PACT team - with promising findings to date
  - Off-site solvent recycling will be available to CCP
  - CCP R&D has prioritized work on recovery and reuse of azeotropic solvent
  - CCP will conduct bench-scale and pilot-scale testing of thin film evaporator recovery of solvent with Pope Scientific (Saukville) beginning May 29, 2001
  - CCP cannot accept a deadline this additional pollution prevention project - the project must be voluntary

# CCP Cooperative Agreement Review

- **Clarification on key regulatory issues**
  - CCP does not need a POTW permit to qualify for the wastewater or zero-discharge exemptions, it is already subject to Section 402 the Clean Water Act.
  - Waste generation guidance for “counting waste” from US EPA states that waste managed on site as wastewater, or in a totally enclosed facility does not count as generated waste
  - After significant regulatory review , CCP maintains that its ECPP project meets the following four regulatory criteria
    - Wastewater exemption under CWA (40 CFR 264.1 (g) (6) )
    - Totally enclosed treatment facility (40 CFR 264.1 (g) (5) )
    - Generator treatment in tanks and containers (40 CFR 262.34)
    - Waste minimization and pollution prevention exemption



# CCP Cooperative Agreement Review

- **Mass Balance Clarification**

- CCP has provided relevant mass balance information on this project for nearly a year - the process is complex and perhaps not easily understood
- Simply described, CCP estimates that:
  - 2 million pounds of solvent would be recovered and would no longer be incinerated
  - 5 million pounds of ignitable reaction water would be rendered non-hazardous by the MPPE system by removing xylene
  - 5000 pounds or more of xylene would be recovered from reaction water
  - 300,000 to 400,000 pounds of glycols would be available for recovery, or would be incinerated as non-hazardous waste



# CCP Cooperative Agreement Review

- **Mass Balance Clarification**

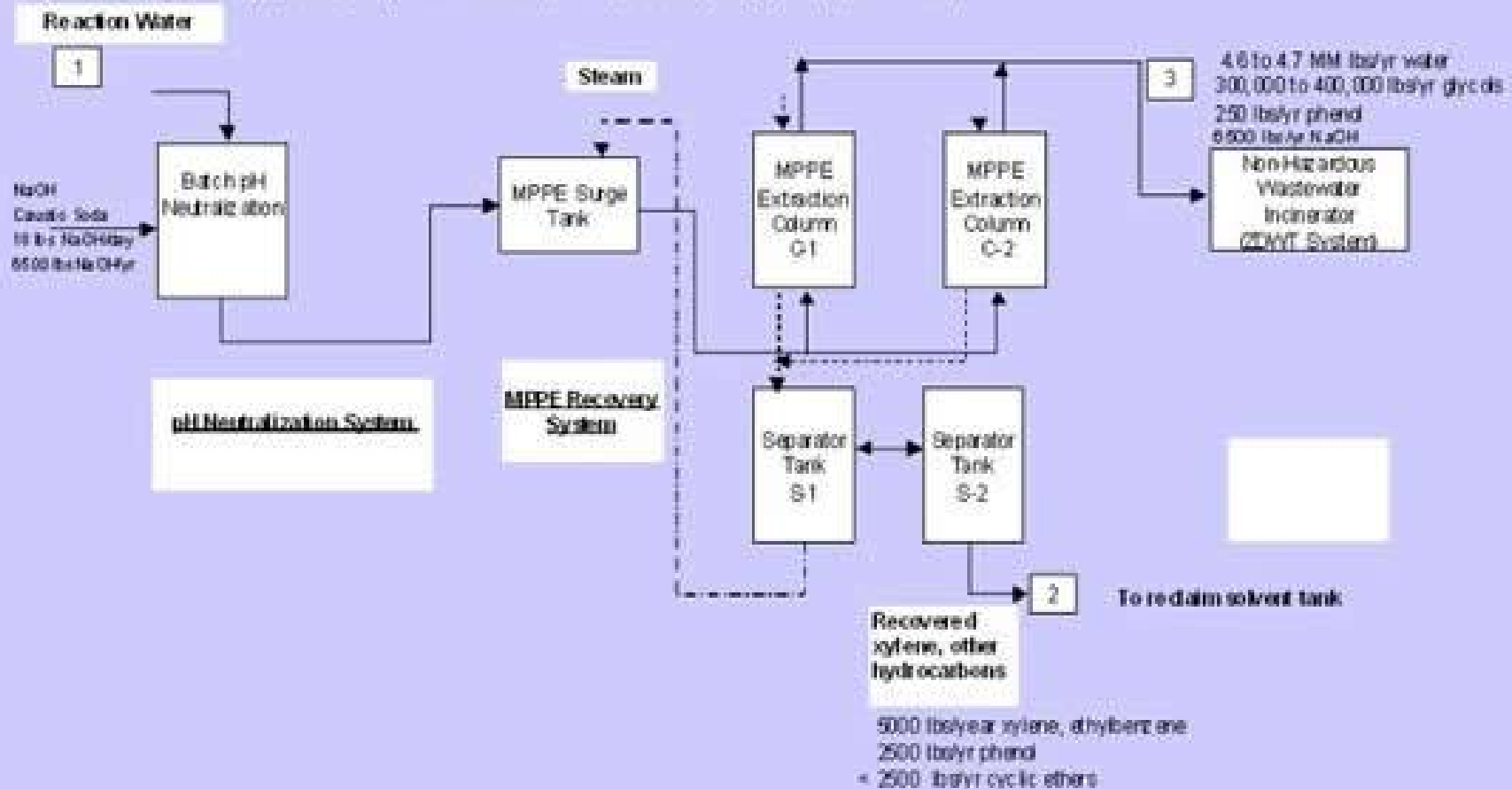
- CCP expanded its mass balance to include constituents that are present - but do not require regulation by WDNR - such as phenol, cyclic ethers, and sodium hydroxide.
- Additional mass balance information may be referenced on the updated block flow diagram and reaction water pie charts.

## BLOCK FLOW DIAGRAM - MPPE with Non-Hazardous Wastewater Incineration (ZDWT System)

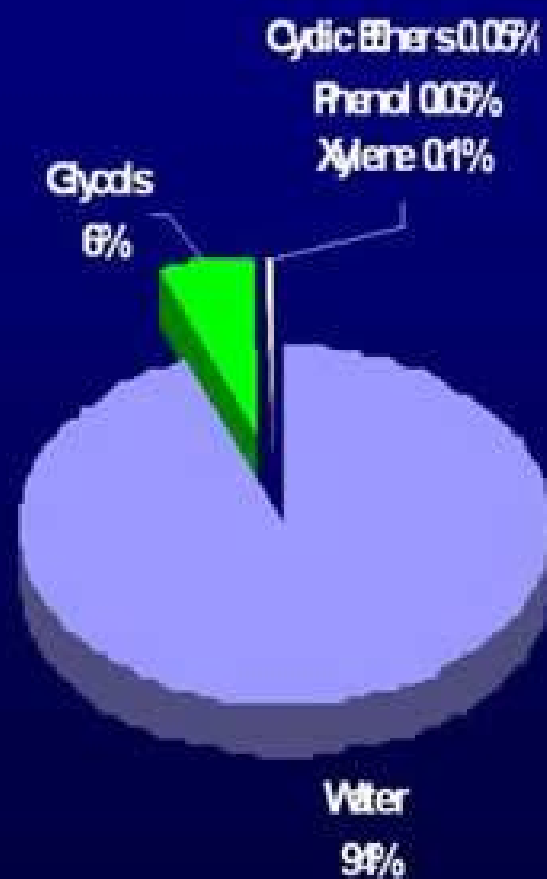
1660 gal/day Reaction Water

5 MM lbs/yr Reaction Water

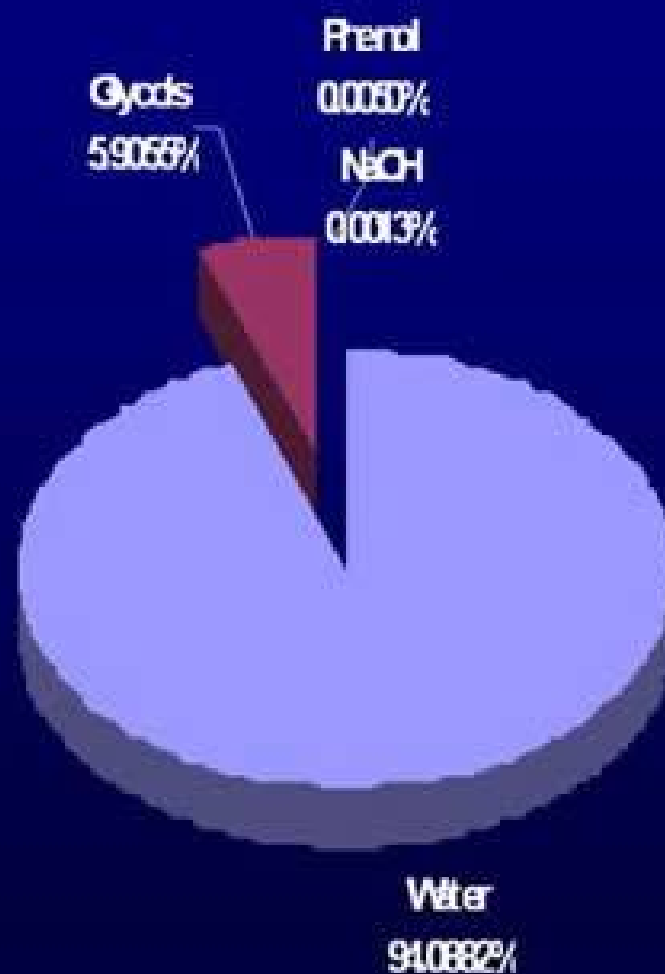
(Containing water (92-94%), glycols (5-8%), ~ 0.1% or less (or PPM) levels of xylene, phenol, cyclic ethers)



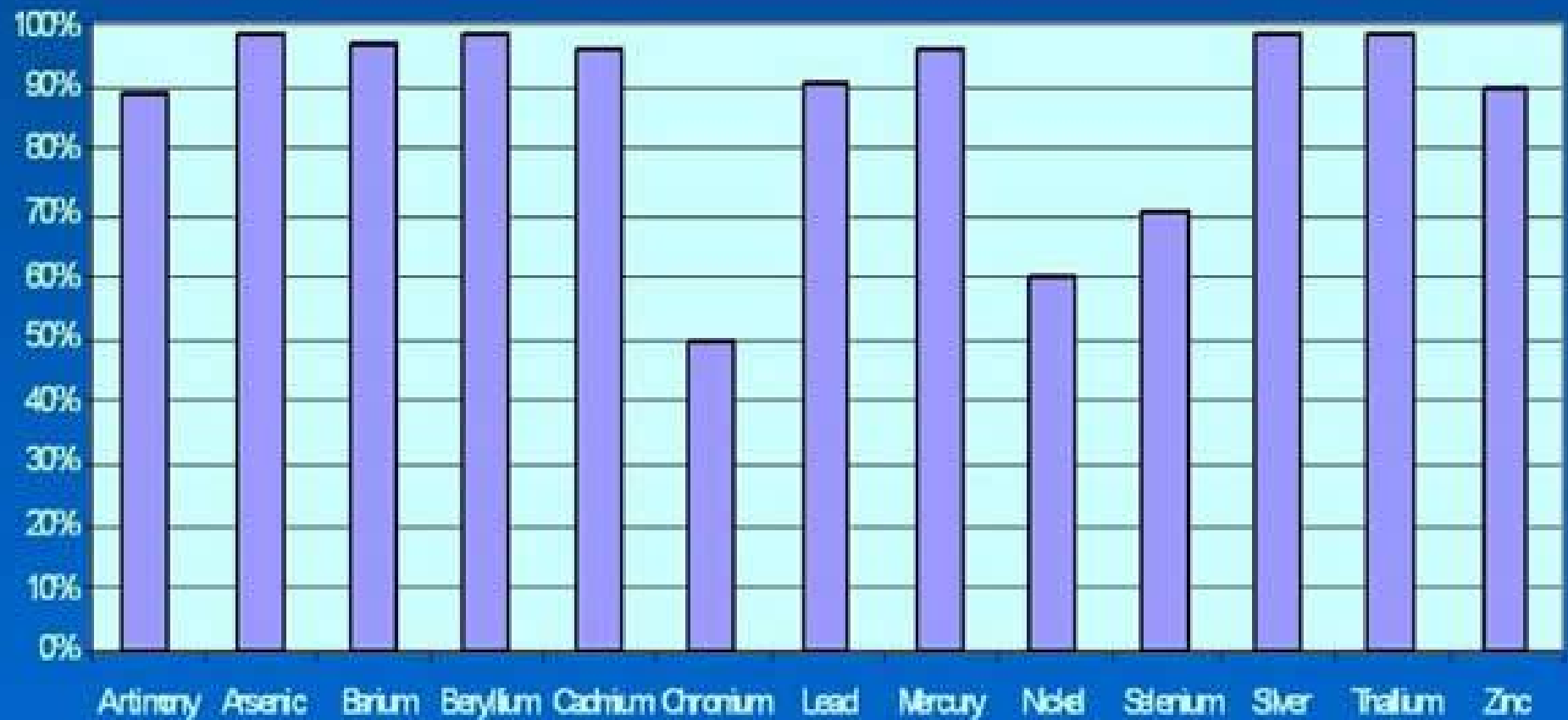
# Raw Reaction Water Composition



## Reaction Water After MPPE Treatment



## Metals Emission Reduction From EOP Project



# METALS EMISSION REDUCTION WITH ECP PROJECT

